Missouri Title V Facts:

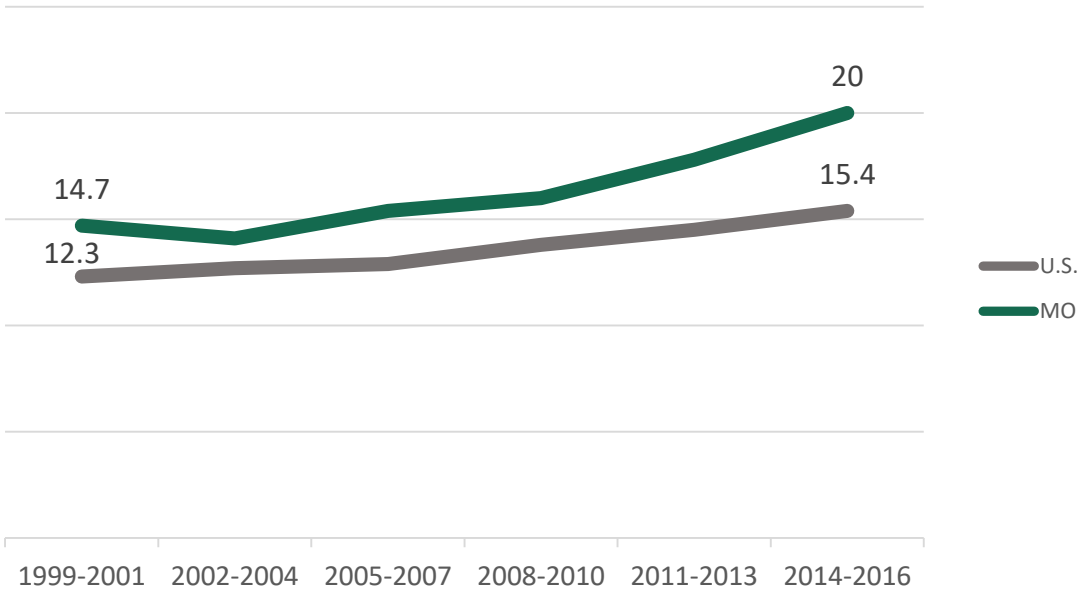
Adolescent Suicide

Background

At 20 suicide-related deaths per 100,000 population, suicide rates in Missouri have remained higher than the national average (15.4 per 100,000) since 1999. During this same time period, suicide rates increased by 36% in Missouri compared to 25% in the US[1]. Suicide among Missouri adolescents between the ages of 10-24 is the second leading cause of death for this age group (15.5 per 100,000). In 2018, 185 Missourians aged 10-24 died of suicide, making up approximately 15% of all suicides that year[2]. According to Missouri's Youth Risk Behavior Survey, the percentage of high school students who say they seriously considered attempting suicide has increased from 15.4% in 2009 to 17.4% in 2019. The percentage of high school students who say they have made a plan about how they will commit suicide has also increased from 11% in 2009 to 14% in 2019[3].

Suicide is more than just a public health issue in Missouri. Not only has it cost Missouri approximately 515,582 years of potential life lost between 2010-2015, but it has also had great financial implications. In total, it is estimated that suicide cost the state of Missouri $1.17 billion. The "value of goods and services never produced because of premature death", also known as work loss, accounted for over $1.13 billion of the cost while the other $3.5 million was lost due to direct costs like transportation and coroner/medical examiner payments[4].

Figure 1. Trends in Suicides Among US and MO, per 100,000 People



Quick Facts

A combination of individual, relationship, community, and societal factors contribute to the risk of suicide. Risk factors are those characteristics associated with suicide—they might not be direct causes[5].

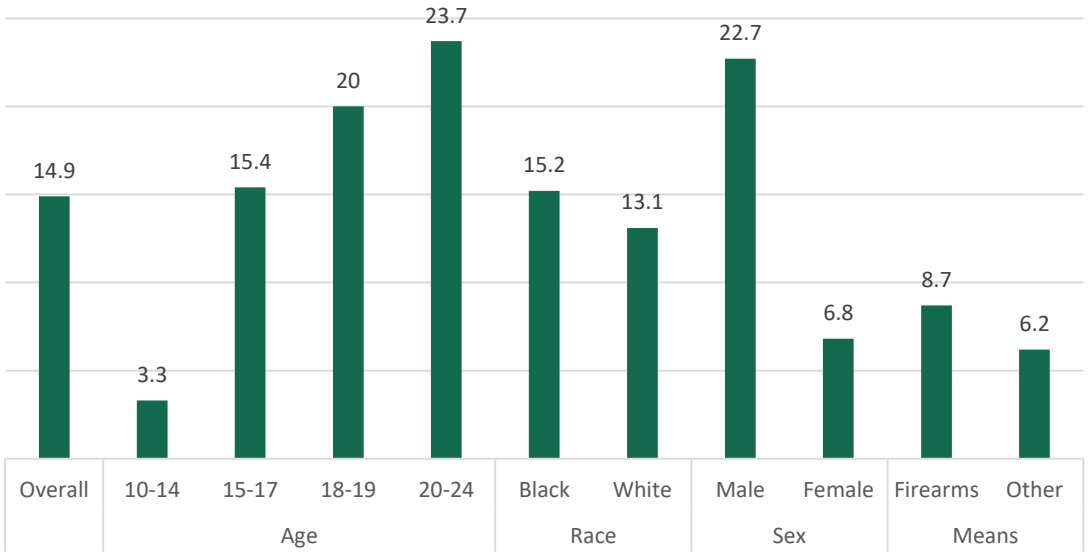
Figure 2. Suicide Risk Factors, CDC

Risk Factors for Suicide	
Family history of suicide	Local epidemics of suicide
Family history of child maltreatment	Isolation, a feeling of being cut off from other people
Previous suicide attempt	Barriers to accessing mental health treatment
History of mental disorders, particularly clinical depression	Loss (relational, social, work, or financial)
History of alcohol and substance abuse	Physical illness
Feelings of hopelessness	Easy access to lethal methods
Impulsive or aggressive tendencies	Unwillingness to seek help because of stigma attached to mental health, substance abuse disorders, or to suicidal thoughts
Cultural and religious beliefs (e.g. belief that suicide is a noble resolution of a personal dilemma)	

Youth Suicide Demographics

During 2016 through 2018, there were 537 suicides that occurred among youth aged 10-24. There was no statistical difference among suicide rates between white youth (15 per 100,000) and black youth (13 per 100,000). However, there still remains a large disparity in suicide rates among male (23 per 100,000) and female (7 per 100,000) victims. Suicide rates were also seen to be higher older youth than their younger peers. The rate of suicide was 3 per 100,000 for victims aged 10-24; 15 per 100,000 for victims aged 15-17; 20 per 100,000 for victims aged 18-19; and 24 per 100,000 for victims aged 20-24.

Figure 3. Demographics of Youth Suicide in Missouri, 2016-2018, per 100,000 people



Bullying and Youth Suicide

Bullying among youth in Missouri continues to be an important issue and can occur both in person or online. Research shows that bullying and suicide-related behavior are closely related, with youth who experience bullying more likely to report higher levels of suicide-related behavior than those who do not. Despite this correlation, it is important to note that it is unclear if bullying directly causes suicide-related behavior and the majority of youth involved in bullying don't engage in suicide-related behavior[6]. In Missouri, 29% of high school students say they have experienced being bullied either in person or online. Of students who have experienced bullying, one in ten say they have seriously considered attempting suicide[7].

Recent studies have also shown that certain subsets of youth experience bullying at higher levels than others. According to research involving the 2016 National Survey of Children's Health, it was found that over 50% of children with diagnosable conditions like birth defects or developmental disorder were victims of bullying. While the study didn't mention if these children went on to consider suicide, it was found that they were more likely to experience additional health challenges when compared to those who weren't bullied[8]. Other research revealed that high school students who identify as gay, lesbian, or bisexual were twice as likely (28%) to experience online bullying then heterosexual students (14%). Furthermore, these students were nearly twice as likely as heterosexual students (34% compared to 19%) to experience bullying on school property. Gay, lesbian, and bisexual students were also three times more likely (43%) than their heterosexual peers (15%) to have seriously considered attempting suicide[9]. Missouri's 2019 Youth Risk Behavior Survey shows that 39% of LGBT high school students experience some form of bullying compared to only 27% of heterosexual students. An equivalent proportion of LGBT students said they seriously considered attempting suicide compared to 13% of heterosexual students[10].

Circumstances Involved in Suicides

In order to help prevent suicides, it is important to learn more information surrounding suicides and the events leading up to them. The National Violent Death Reporting System (NVDRS) is the only state-based surveillance system that collects more than 600 data elements from death certificates, coroner/medical examiner (CME) reports, and law enforcement reports to help link together the "who, when, where, and how" behind violent deaths to inform "why" they occurred. In 2016, Missouri was awarded funding from the CDC to begin collecting information on all violent deaths in the state, especially suicides.

Among individuals 10-24 years old who committed suicide in Missouri in 2017, the top three circumstances involved in suicides were: 1) that the victims were recently diagnosed with a mental health problem, 2) that the victims were identified by family and friends as having a depressed mood, and 3) that the victims had left one or more suicide notes. Studies from Europe and Australia have found that victims who leave suicide notes often were more likely to be involved in interpersonal conflicts, such as divorce; have no history of psychiatric illness; and have no history of recent psychiatric hospitalization[11 12].

Figure 4. Circumstances Surrounding All Suicides Compared to those Aged 10-24, MOVDRS 2017

Top 10 Circumstances Surrounding All Suicides In Missouri	
Diagnosed Mental Health Problem	43%
Depressed Mood	38%
Left a Suicide Note	36%
History of Mental Illness Treatment	30%
History of Suicidal Thoughts	29%
Previously Disclosed Suicide Intent	29%
Problem with Intimate Partner	24%
Currently Receiving Treatment for Mental Illness	21%
History of Suicide Attempt	18%
Recently Involved in an Argument	18%

Top 10 Circumstances Surrounding Suicides Aged 10-24 In Missouri	
Diagnosed Mental Health Problem	44%
Depressed Mood	41%
Left a Suicide Note	35%
Problem with Intimate Partner	35%
Previously Disclosed Suicide Intent	32%
History of Mental Illness Treatment	30%
History of Suicidal Thoughts	28%
Recently Involved in an Argument	24%
Currently Receiving Treatment for Mental Illness	18%
Crisis Problem with Intimate Partner	18%

What is Being Done?

Missouri Suicide Prevention Project (MSPP): The Missouri Suicide Prevention Project (MSPP) is a joint project between the Missouri Department of Mental Health (DMH) and the Missouri Institute of Mental Health (MIMH). The MSPP primarily targets youth-serving organizations and at-risk youth and young adults ages 10 to 24. The project has sponsored training for more than 200 instructors for a variety of suicide prevention training programs.

Signs of Suicide (SOS) Training: Evidence-based program that addresses suicide risk and depression while reducing suicide attempts by engaging school staff and parents as partners in prevention. The program is available for purchase and can be implemented by individual schools or whole school districts.

Wyman Social and Emotional Learning (SEL) Challenge: Based on Wyman's Teen Outreach Program (TOP) which uses a combination of educational peer group meetings; community service learning; and positive adult guidance and support to promote the positive development of adolescents. Wyman combined Youth Thrive and Socio-Emotional Learning training was offered local public health agencies and community partners through the Title V Block Grant. https://www.selpractices.org/partner/wyman

MO HealthNet: MO HealthNet, Missouri's Medicaid program, updated policy in 2018 to allow mental and behavioral health services to be provided to students at their school, with the consent of their legal guardians. Students do not need to have an Individualized Education Plan to be eligible to utilize these "on-campus" mental and behavioral health services. https://dss.mo.gov/mhd/providers/pdf/bulletin40-54_2018apr17.pdf

Child Safety Learning Collaborative: Missouri has participated in the Child Safety Learning Collaborative, sponsored through the Children's Safety Network, with the goal of advancing evidence-based strategies for injury and violence prevention. https://www.childrenssafetynetwork.org/CSLC

Mental Health Crisis Toolkit: The DHSS Injury Prevention and Adolescent Health Programs will partner with the Society for the Prevention of Teen Suicide to bring a Mental Health Crisis Toolkit to Missouri and pilot it during the fiscal year (FFY20). The programs will work with an already established group of school and health organizations (Combating the Opioid Epidemic in Schools Communities - COPE) and University of Missouri to adapt and pilot this toolkit for implementation in Missouri counties, with focus on the counties where the LPHA chose Mental Health as their MCH domain. Once piloted and evaluated, this toolkit will provide families with comprehensive guidance in the midst of a mental health crisis.

Local Public Health Efforts: Local public health agencies may choose to address adolescent mental health, bullying, and child abuse and neglect through their Maternal-Child Health Services contracts. In 2018, 48 local agencies provided bullying prevention information and training in their community, including providing "Parents Talking to Their Kids" training to reduce bullying.

References

1. Vital Signs: Trends in Suicide Rates and Circumstances Contributing to Suicide — United States, 1999–2016 and 27 States, 2015. MMWR Morb Mortal Wkly Rep 2018;67(22):617-624.
2. Missouri Department of Health and Senior Services (DHSS). Death MICA. MOPHIMS (Missouri Public Health Information Management System). https://webapp01.dhss.mo.gov/MOPHIMS/ProfileBuilder?pc=1. Accessed February 27, 2020.
3. Missouri Department of Health and Senior Services (DHSS), Bureau of Epidemiology and Vital Statistics. Youth Risk Behavior Survey, 2019.
4. Missouri Foundation for Health. (2017). National Violent Death Reporting System. Retrieved from https://mffh.org/wp-content/uploads/2017/02/National-Violent-Death-Reporting-System.pdf. Accessed February 21, 2020.
5. Centers for Disease Control and Prevention. Risk Factors for Suicide. Retrieved from https://www.cdc.gov/violenceprevention/suicide/riskprotectivefactors.html. Accessed February 27, 2020.
6. Centers for Disease Control and Prevention. The Relationship Between Bullying and Suicide. Retrieved from https://www.cdc.gov/violenceprevention/pdf/bullying-suicide-translation-final-a.pdf. Accessed February 27, 2020.
7. Missouri Department of Health and Senior Services (DHSS), Bureau of Epidemiology and Vital Statistics. Youth Risk Behavior Survey, 2019.
8. Jackson, D. B., Vaughn, M. G., & Kremer, K. P. (2019). Bully victimization and child and adolescent health: new evidence from the 2016 NSCH. Annals of Epidemiology, 29, 60-66.
9. Kann, L., Olsen, E. O. M., McManus, T., Harris, W. A., Shanklin, S. L., Flint, K. H., et al. (2016). Sexual identity, sex of sexual contacts, and health-related behaviors among students in grades 9–12—United States and selected sites, 2015. Morbidity and Mortality Weekly Report: Surveillance Summaries, 65(9), 1-202.
10. Missouri Department of Health and Senior Services (DHSS), Bureau of Epidemiology and Vital Statistics. Youth Risk Behavior Survey, 2019.
11. Paraschakis, A., Michopoulos, I., Douzenis, A., Christodoulou, C., Koutsaftis, F., & Lykouras, L. (2012). Differences between suicide victims who leave notes and those who do not. Crisis, 33, 344-349.
12. Haines, J., Williams, C. L., & Lester, D. (2011). The characteristics of those who do and do not leave suicide notes: is the method of residuals valid? OMEGA-Journal of Death and Dying, 63(1), 79-94.